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13	42	(heartbeat$5 (ping adj pong) (control adj message$5)) and lim.in.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/08/04 17:42

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SPL031 - Assignment 3
... a client (ie, a multimedia file description **acknowledgement**). ... and cleaning this client
connection registry (more ... Moreover, the task of **heartbeat** multicast is ...
www.cs.bgu.ac.il/~spl031/assignments/EX3/ex3.htm - 68k - Cached - Similar pages

SPL031 - Assignment 4
... server socket, it should start broadcasting the **heartbeat** messages using ... the messages
is responsible for sending the **acknowledgement**. ... Normal **Connection** Closing. ...
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... Index Work Order **Acknowledgement** 7 4 ... Response completed (Boolean) • **Connection**
completed (Boolean ... Components SITAR JavaSpace **Heartbeat** Monitor Configuration ...
people.anr.mcnc.org/~fwang2/ papers/02_SITAR_Hiltonhead.pdf - Similar pages

SCTP Parameters - RFC 2960 (last updated 25 May 2004) "Stream ...
... RFC2960] 11 - Cookie **Acknowledgement** (COOKIE ACK ... Parameter Type Value -----
Heartbeat Info 1 ... Q.2631.1 "IP **Connection** Control Signaling ...
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... Info **Heartbeat** info type=1 **Heartbeat** info length ... Chunk Length Cumulative TSN **Acknowledgement**
Shutdown Ack ... of SCCP connectionless and **connection** oriented service ...
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... chunk is acknowledged with a selective **acknowledgement** (SACK ... With SCTP, if the primary
connection is lost, a ... 11 Page 11 of 11 Sending '**heartbeat**' chunks at ...
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TCP/IP : Java Glossary
... in the stream up to offset **acknowledgement** number + n ... How long should the socket **connection**
be allowed to be ... could periodically send tiny **heartbeat** messages to ...
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... destination socket's receive buffer and sends back an **acknowledgement**. ... data out-of-band,
sending the **heartbeat** over the same **connection** as application ...
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<u>TCP / IP Suite - RLOGIN | RTSP | SCTP | SLP | SMPP | SMTP | SNMP ...</u>
... send this chunk to its peer endpoint as a response to a **Heartbeat** Request ... NOOP, Causes
no action, except **acknowledgement** from server ... RSET, Resets mail **connection**. ...
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1 Paradigms for process interaction in distributed programs   ◼
Gregory R. Andrews
March 1991 **ACM Computing Surveys (CSUR)**, Volume 23 Issue 1

Full text available: 📄 pdf(3.77 MB)

Additional Information: full citation, abstract, references, citings, index terms, review

Distributed computations are concurrent programs in which processes communicate by message passing. Such programs typically execute on network architectures such as networks of workstations or distributed memory parallel machines (i.e., multicomputers such as hypercubes). Several paradigms—examples or models—for process interaction in distributed computations are described. These include networks of filters, clients, and servers, heartbeat algorithms, probe/echo algorithms, broa ...

Keywords: clients and servers, distributed and parallel algorithms, distributed programming, distributed programming methods, heartbeat algorithms, networks of filters, patterns for interprocess communication, probe/echo algorithms, replicated servers, token-passing algorithms

2 Log-based receiver-reliable multicast for distributed interactive simulation   ◼
Hugh W. Holbrook, Sandeep K. Singhal, David R. Cheriton
October 1995 **ACM SIGCOMM Computer Communication Review , Proceedings of the conference on Applications, technologies, architectures, and protocols for computer communication**, Volume 25 Issue 4

Full text available: 📄 pdf(1.44 MB)

Additional Information: full citation, abstract, references, citings, index terms

Reliable multicast communication is important in large-scale distributed applications. For example, reliable multicast is used to transmit terrain and environmental updates in distributed simulations. To date, proposed protocols have not supported these applications' requirements, which include wide-area data distribution, low-latency packet loss detection and recovery, and minimal data and management over-head within fine-grained multicast groups, each containing a single data source.In this pa ...

3 Efficient data consistency in HLA/DIS++   ◼
Sudhir Srinivasan
November 1996 **Proceedings of the 28th conference on Winter simulation**

Full text available: pdf(638.25 KB)   Additional Information: full citation, references, citings

4 Automated packet trace analysis of TCP implementations
Vern Paxson
October 1997 **ACM SIGCOMM Computer Communication Review , Proceedings of the
ACM SIGCOMM '97 conference on Applications, technologies,
architectures, and protocols for computer communication**, Volume 27 Issue 4

Full text available: pdf(1.99 MB)   Additional Information: full citation, abstract, references, citings, index
terms

We describe tcpanaly, a tool for automatically analyzing a TCP implementation's behavior by
inspecting packet traces of the TCP's activity. Doing so requires surmounting a number of
hurdles, including detecting packet filter measurement errors, coping with ambiguities due
to the distance between the measurement point and the TCP, and accommodating a
surprisingly large range of behavior among different TCP implementations. We discuss why
our efforts to develop a fully general tool failed, and det ...

5 An extensible probe architecture for network protocol performance measurement
G. Robert Malan, Farnam Jahanian
October 1998 **ACM SIGCOMM Computer Communication Review , Proceedings of the
ACM SIGCOMM '98 conference on Applications, technologies,
architectures, and protocols for computer communication**, Volume 28 Issue 4

Full text available: pdf(1.83 MB)   Additional Information: full citation, abstract, references, citings, index
terms

This paper describes the architecture and implementation of Windmill, a passive network
protocol performance measurement tool. Windmill enables experimenters to measure a
broad range of protocol performance metrics by both reconstructing application-level
network protocols and exposing the underlying protocol layers' events. Windmill is split into
three functional components: a dynamically compiled Windmill Protocol Filter (WPF), a set of
abstract protocol modules, and an extensible experiment e ...

Keywords: online analysis, packet filter, passive measurement, protocol performance

6 Several secure store and forward devices
David M. Goldschlag
January 1996 **Proceedings of the 3rd ACM conference on Computer and
communications security**
Full text available: pdf(1.07 MB)   Additional Information: full citation, references, citings, index terms

7 Floor control for large-scale MBone seminars
Radhika Malpani, Lawrence A. Rowe
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8 Performance and dependability evaluation of scalable massively parallel computer
systems with conjoint simulation
Axel Hein, Mario Dal Cin
October 1998 **ACM Transactions on Modeling and Computer Simulation (TOMACS)**,
Volume 8 Issue 4

Full text available: pdf(501.59 KB)   Additional Information: <u>full citation</u>, <u>abstract</u>, <u>references</u>, <u>citings</u>, <u>index terms</u>, <u>review</u>

Computer systems are becoming more and more a part of our daily life; business and industry rely on their service, and the health of human beings depends on their correct functioning. Computer systems used for critical tasks have to be carefully designed and tested during the early design stage, the prototype phase, and their operational life. Methods and tools are required to support and facilitate this vital task. In this article, we tackle the issue of system-level performance and depen ...

Keywords: fault-tolerant and large-scale computer systems, hierarchical model design, object-oriented modeling, process-based simulation, timed Petri nets

9 <u>A reliable multicast framework for light-weight sessions and application level framing</u>
Sally Floyd, Van Jacobson, Ching-Gung Liu, Steven McCanne, Lixia Zhang
December 1997 **IEEE/ACM Transactions on Networking (TON)**, Volume 5 Issue 6
Full text available: pdf(310.74 KB)   Additional Information: <u>full citation</u>, <u>references</u>, <u>citings</u>, <u>index terms</u>, <u>review</u>

Keywords: Internetworking, computer network performance, computer networks

10 <u>Demonstrable fault tolerance for distributed Ada</u>
Pat Rogers, Steve O'Neill, Marc Pitarys, Ken Littlejohn
October 1993 **Proceedings of the conference on TRI-Ada '93**
Full text available: pdf(931.99 KB)   Additional Information: <u>full citation</u>, <u>references</u>, <u>citings</u>, <u>index terms</u>

11 <u>Constructive and virtual model linkage</u>
David R. Pratt, Matthew A. Johnson
December 1995 **Proceedings of the 27th conference on Winter simulation**
Full text available: pdf(644.81 KB)   Additional Information: <u>full citation</u>, <u>references</u>, <u>index terms</u>

12 <u>A reliable multicast framework for light-weight sessions and application level framing</u>
Sally Floyd, Van Jacobson, Steve McCanne, Ching-Gung Liu, Lixia Zhang
October 1995 **ACM SIGCOMM Computer Communication Review , Proceedings of the conference on Applications, technologies, architectures, and protocols for computer communication**, Volume 25 Issue 4
Full text available: pdf(1.67 MB)   Additional Information: <u>full citation</u>, <u>abstract</u>, <u>references</u>, <u>citings</u>, <u>index terms</u>

This paper describes SRM (Scalable Reliable Multicast), a reliable multicast framework for application level framing and light-weight sessions. The algorithms of this framework are efficient, robust, and scale well to both very large networks and very large sessions. The framework has been prototyped in wb, a distributed whiteboard application, and has been extensively tested on a global scale with sessions ranging from a few to more than 1000 participants. The paper describes the principles tha ...

13 <u>Transparent fault tolerance for distributed Ada applications</u>
Mark A. Breland, Steven A. Rogers, Guillaume P. Brat, Kenneth L. Nelson
November 1994 **Proceedings of the conference on TRI-Ada '94**

Full text available: pdf(1.62 MB)   Additional Information: <u>full citation</u>, <u>abstract</u>, <u>references</u>, <u>citings</u>, <u>index terms</u>

The advent of open architectures and initiatives in massively parallel supercomputing, combined with the maturation of distributed processing methods and algorithms, has enabled the implementation of responsive software-based fault tolerance. Expanding capabilities of distributed Ada runtime environments further stimulate the incorporation of hardware fault tolerance into critical, realtime embedded systems. Through the integration of proven Ada program component distribution and virtually ...

14 <u>The first embedded distributed Ada95 application</u>

Patrick Rogers, Marc Pitarys
November 1995 **Proceedings of the conference on TRI-Ada '95: Ada's role in global markets: solutions for a changing complex world**

Full text available: pdf(1.22 MB)   Additional Information: <u>full citation</u>, <u>references</u>, <u>citings</u>

15 <u>On the implementation and use of Ada on fault-tolerant distributed systems</u>

John C. Knight, John I. A. Urquhart
November 1984 **ACM SIGAda Ada Letters**, Volume IV Issue 3

Full text available: pdf(974.93 KB)   Additional Information: <u>full citation</u>, <u>references</u>

16 <u>Paradigms 1: Using events to build large scale distributed applications</u>

Richard Hayton, Jean Bacon, John Bates, Ken Moody
September 1996 **Proceedings of the 7th workshop on ACM SIGOPS European workshop: Systems support for worldwide applications**

Full text available: pdf(680.33 KB)   Additional Information: <u>full citation</u>, <u>abstract</u>, <u>references</u>, <u>citings</u>

We have extended an Interface Definition Language to handle event registration and notification. Clients register interest in specified classes of events, and servers then notify them of any occurrence asynchronously. Event occurrences are identified by parameters which conform to IDL typing constraints and can therefore be used in synchronous method invocations. Methods to handle registration and notification are generic and can be inherited by objects of any class: as a by-product of IDL proce ...

17 <u>JLINK—Janus fast movers</u>

William J. Caldwell, Ralph Wood, Maria C. Pate
December 1995 **Proceedings of the 27th conference on Winter simulation**

Full text available: pdf(637.27 KB)   Additional Information: <u>full citation</u>, <u>references</u>, <u>index terms</u>

18 <u>Recovery in the Calypso file system</u>

Murthy Devarakonda, Bill Kish, Ajay Mohindra
August 1996 **ACM Transactions on Computer Systems (TOCS)**, Volume 14 Issue 3

Full text available: pdf(318.88 KB)   Additional Information: <u>full citation</u>, <u>abstract</u>, <u>references</u>, <u>citings</u>, <u>index terms</u>, <u>review</u>

This article presents the deign and implementation of the recovery scheme in Calypso. Calypso is a cluster-optimized, distributed file system for UNIX clusters. As in Sprite and AFS, Calypso servers are stateful and scale well to a large number of clients. The recovery scheme in Calypso is nondisruptive, meaning that open files remain open, client modified data are saved, and in-flight operations are properly handled across server recover. The scheme uses distributed state amount the client ...

Keywords: Calypso, cluster systems, distributed state, state reconstruction

19 System support for object groups

Rachid Guerraoui, Pascal Felber, Benoît Garbinato, Karim Mazouni

October 1998 **ACM SIGPLAN Notices , Proceedings of the 13th ACM SIGPLAN conference on Object-oriented programming, systems, languages, and applications**, Volume 33 Issue 10

Full text available: pdf(2.12 MB)   Additional Information: full citation, abstract, references, citings, index terms

This paper draws several observations from our experiences in building support for object groups. These observations actually go beyond our experiences and may apply to many other developments of object based distributed systems.Our first experience aimed at building support for Smalltalk object replication using the Isis process group toolkit. It was quite easy to achieve group transparency but we were confronted with a strong mismatch between the rigidity of the process group model and the fle ...

20 WELD—an environment for Web-based electronic design

Francis L. Chan, Mark D. Spiller, A. Richard Newton

May 1998 **Proceedings of the 35th annual conference on Design automation - Volume 00**

Full text available: pdf(331.99 KB)   Additional Information: full citation, abstract, references, citings, index terms

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Increasing size and geographical separation of design data and teams has created a need for a network-based electronic design environment that is scaleable, adaptable, secure, highly available, and cost effective. In the WELD project we are evaluating aspects of the network integration and communication infrastructure needed to enable such a distributed design environment. The architecture of WELD and the components developed to implement the system, together with performance result ...

Keywords: high-level synthesis, telecommunication

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